A collection of historical artifacts is arranged on a light-colored surface. In the upper left, a portion of a wooden chessboard with a checkered pattern and several chess pieces is visible. Below the chessboard, there are two medals: one with a red ribbon and a circular emblem, and another with a blue ribbon and a circular emblem. To the right of these medals is a large, ornate silver star-shaped medal with a central circular emblem. In the lower left, a round compass with a metal frame and a glass lens is visible. A pair of round-rimmed glasses with thin metal frames and a single wire bridge is positioned diagonally across the center of the image, overlapping the compass and the star-shaped medal.

# The Fish Quality Index as a Risk Communication Tool

By:

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EPA/ORD/NRMRL



# Outline:

- ◆ Introduction to Risk Communication in ORD
- ◆ Introduction to persistent bioaccumulating toxins (PBT)
- ◆ Demonstration of alpha version of the Fish Quality Index





# Risk Management

- ◆ Reduce Risk By Reducing Emissions of Toxics by “filtering/stabilizing/treating” the waste stream or by reducing the waste stream through P2
- ◆ Reduce Risk By Reducing Exposures to Toxics by Behavioral Means



# Central Question of Risk Communication

How do you get people to :

Wear a Seatbelt

Wear a Hardhat

Wear Sunscreen

Wear a Condom

(hopefully not all at the same time)

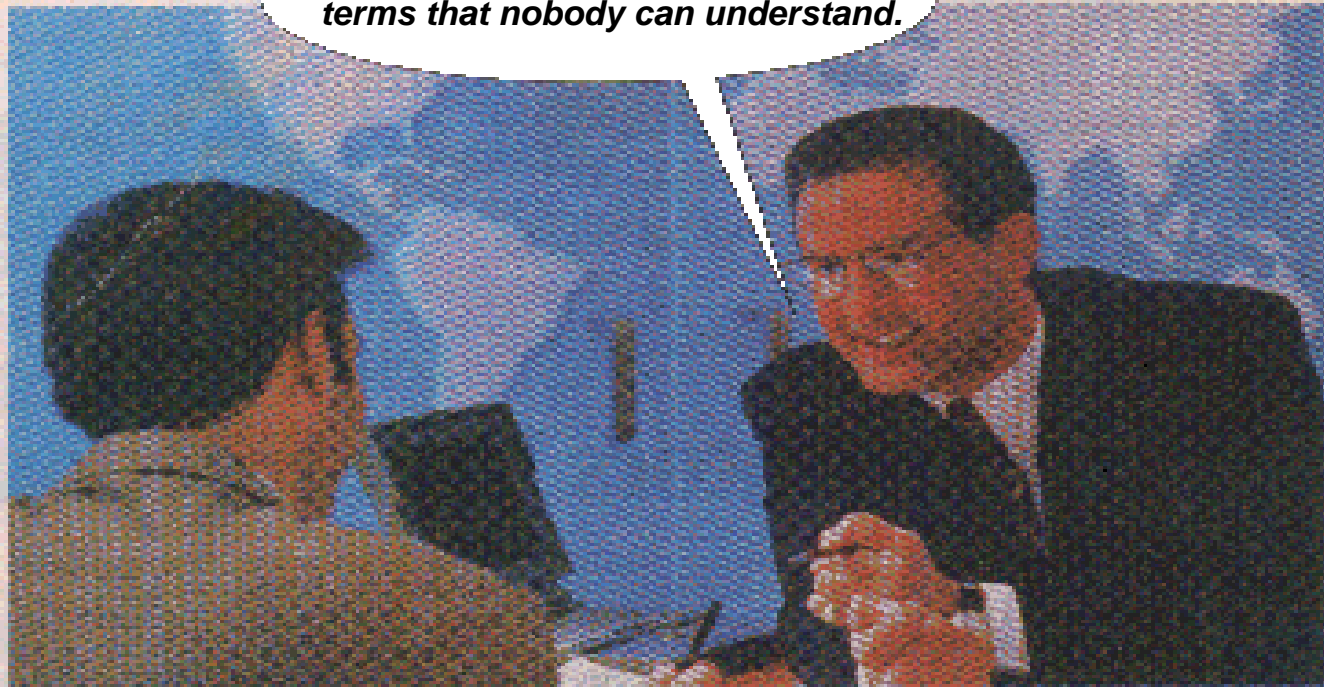
Or stop smoking, or eat more vegetables...

# Standard EPA Approach

**What you expect.**

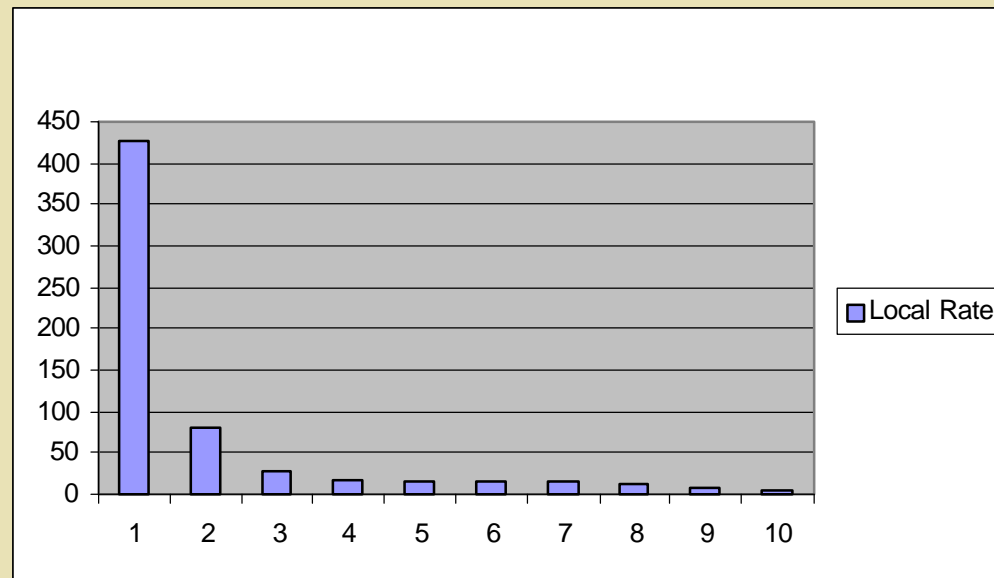
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*Bear with me while I put this in  
terms that nobody can understand.*





# Importance of Risk Communication





# Risk Communication “Laboratories”

- ◆ Community Based Environmental Protection Programs
- ◆ EMPACT



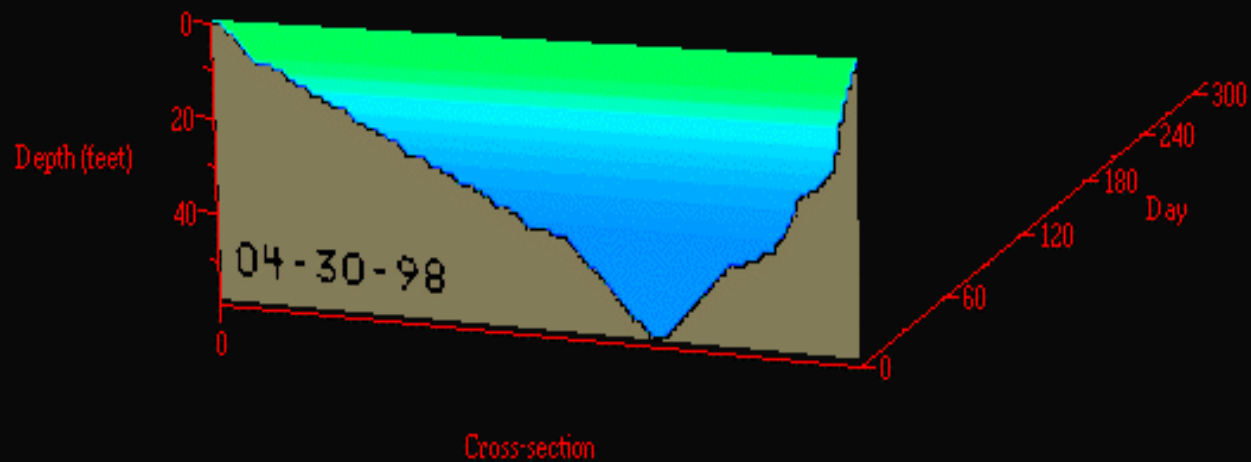
# Risk Communication Tools

- ◆ Data Visualization Tools-Graphics/GIS
- ◆ Data Interpretation Tools- Indices

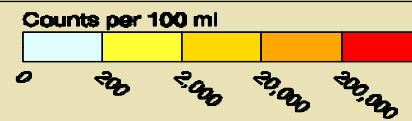
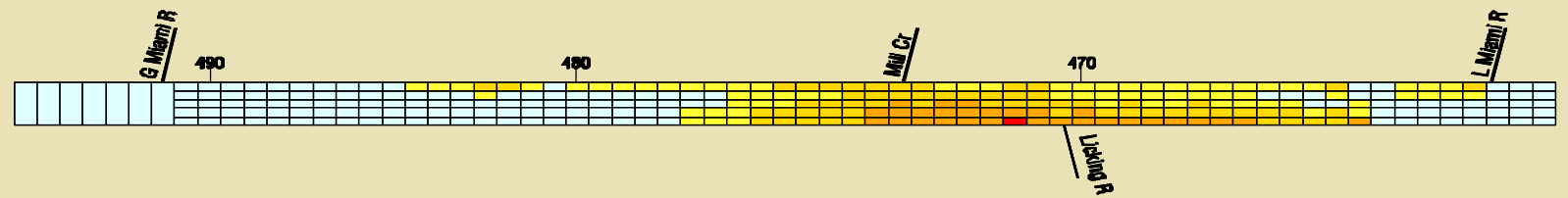
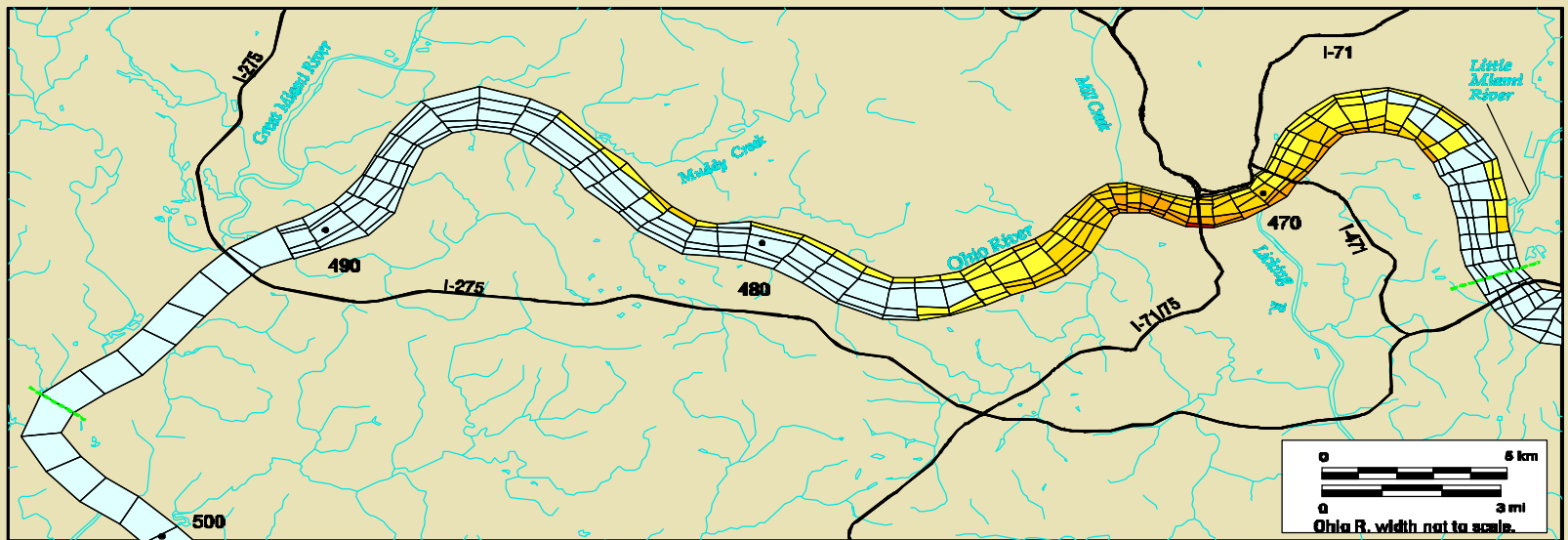


# Lake Access Data Visualization

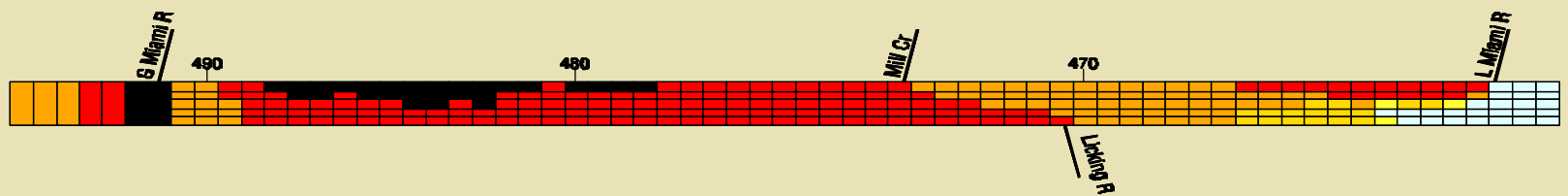
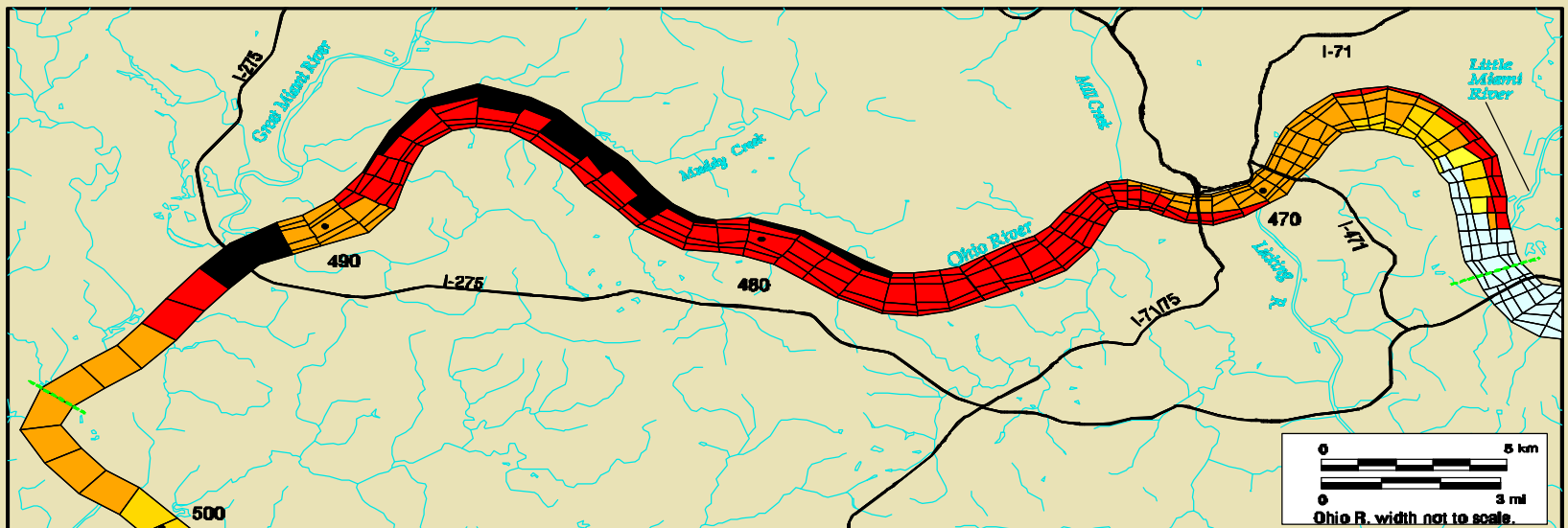
## Ice Lake Temperatures



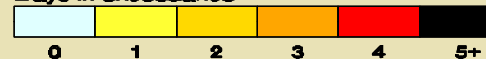
# Data Interpretation-WQI




# Data Interpretation- WQI



Days in exceedance







# Persistent Bioaccumulating Toxin (PBT)

- ◆ Mercury (methylmercury)
- ◆ Dioxins
- ◆ Polychlorinated biphenyl (PCB)



# PBT Characteristics

- ◆ Environmentally Stable (Persistent)
- ◆ Amplify up the food chain (bioaccumulation)
- ◆ Exposure is often via food sources



A collection of historical artifacts is arranged on a light-colored surface. In the top left, a portion of a wooden chessboard with a checkered pattern and several chess pieces is visible. Below the chessboard, there are two medals: one with a red ribbon and a circular emblem, and another with a blue ribbon and a circular emblem. To the right of these medals is a large, ornate silver star-shaped medal with a central emblem. In the bottom left corner, there is a round, silver-colored compass with a visible needle and markings. A pair of round, gold-rimmed glasses with thin temples is placed diagonally across the lower right portion of the image.

# Fish Quality Index

Risk Communication  
Tools: Alpha Version